

**We claim:**

1. An optical pulse source for generating RZ pulses at a wavelength  $\lambda$  comprising:
  - a modulated light source for generating optical pulses of light over an optical spectrum including  $\lambda$ , the source modulated in power and frequency;
- 5        a Bragg grating having a filter response, the grating coupled to the light source and stabilized so that the filter response is over a range overlapping at least part of the optical spectrum of the source;
  - one or more optical taps coupled to the light source and the Bragg grating for tapping a signal representative of the light supplied to the grating and a signal
- 10      representative of the light reflected or transmitted by the grating; and,
  - a feedback circuit responsive to the tapped signals for adjusting the wavelength  $\lambda$  of the light source.
2. The optical pulse source of claim 1 wherein the feedback circuit adjusts the shape of
- 15      pulses passing through the filter to produce RZ pulses.
3. The optical pulse source of claim 1 wherein the light source comprises a distributed feedback laser.
- 20      4. The optical pulse source of claim 1 wherein the Bragg grating is coupled to the source by polarization maintaining optical fiber.
5. The optical pulse source of claim 1 wherein the Bragg grating comprises a fiber Bragg grating stabilized by disposition in a controlled temperature environment..

6. The optical pulse source of claim 1 wherein the Bragg grating is tunable
7. The optical pulse source of claim 1 wherein the one or more optical taps comprise a  
5 directional tap.
8. The optical pulse source of claim 1 wherein the one or more optical taps comprises a  
tilted fiber grating.
- 10 9. The optical pulse source of claim 1 wherein the one or more optical taps comprise a  
fiber coupler.
10. The optical pulse source of claim 1 wherein the light source comprises a  
temperature adjustable distributed feedback laser and the feedback circuit comprises an  
15 electronic circuit responsive to the tapped signals for adjusting the temperature of the  
laser.